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(71) Applicant (for all designated States except US): **THE REGENTS OF THE UNIVERSITY OF MICHIGAN ET AL.** [US/US]; Technology Management Office, Wolverine Tower, Room 2071, 3003 S. State Street, Ann Arbor, MI 48109-1280 (US).

(72) Inventors; and

(75) Inventors/Applicants (for US only): **LIN, Chia, Ying** [—/US]; 2131 Glencoe Hills Drive, Apartment 10, Ann Arbor, MI 48109 (US). **HOLLISTER, Scott, J.** [US/US]; 2015 Churchill Drive, Ann Arbor, MI 48103 (US). **LIN, Cheng-Yu** [—/US]; 3060 Whisperwood Drive, Apartment 406, Ann Arbor, MI 48105 (US).

(74) Agents: **WADE, Bryant, E. et al.**; Harness, Dickey & Pierce, P.L.C., P.O. Box 828, Bloomfield Hills, MI 48303 (US).

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(54) Title: INTEGRATED GLOBAL LAYOUT AND LOCAL MICROSTRUCTURE TOPOLOGY OPTIMIZATION APPROACH FOR SPINAL CAGE DESIGN AND FABRICATION

(57) Abstract: A method of designing an interbody fusion cage is disclosed. The method uses topology optimization algorithms to define the structural layout and the inner microstructures of the cage. After the structural layout is defined, a density distribution process is performed. Based on the density distribution, the inner microstructures of the cage are defined.